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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,573	10/15/2003	Edward J. Seppi	VM7036492002	7129

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EXAMINER	
YUN, JURIE	

ART UNIT	PAPER NUMBER
2882	

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11/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/687,573	SEPPI ET AL.	
	Examiner	Art Unit	
	Jurie Yun	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-13,21-25,27-34 and 39-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-13,21-25,27-34 and 39-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 21, and 39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 6-13, 21-25, 27-34, 39-42, and 46-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besson (USPN 6,950,493 B2) in view of Albert (USPN 4,048,496).

4. With respect to claims 1, 21, and 39, Besson discloses an apparatus for use in a radiation procedure, comprising: a radiation filter (Fig. 2, 150) having a first portion (152) and a second portion (154), the first and the second portions forming a layer for filtering radiation impinging thereon; wherein the first portion is made from a first X-ray filtering material, and the second portion is made from a second X-ray filtering material (column 9, lines 45-60 & column 11, lines 21-28); a structure (112) having a cavity, the radiation filter (150) in operative association with the structure (via control unit, 110); and a disk located within the cavity, the disk having a first target material and a second target material (column 21, lines 52-57). The first and the second filter factor is applied automatically using a machine (control unit, 110 controls motor, 156). Besson does not

specifically disclose the first target material corresponds with the first portion of the radiation filter, and the second target material corresponds with the second portion of the radiation filter. Albert discloses a first target material corresponds with a first portion of a radiation filter, and a second target material corresponds with a second portion of the radiation filter (column 7, lines 56-68 & column 8, lines 59-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Besson to employ a first target material corresponding with the first portion of the radiation filter, and a second target material corresponding with the second portion of the radiation filter, to enhance versatility of the equipment by providing an X-ray source providing for selection of any of a plurality of different wavelength spectra, as taught by Albert (column 2, lines 30-46).

5. With respect to claim 2, Besson discloses the first and the second target materials (Fig. 28A, 2702 & 2704) are parts of a radiation source (Fig. 28B, 2802), and the apparatus further comprises the radiation source.

6. With respect to claim 3, Besson discloses a gantry to which the radiation source is secured (column 3, lines 53-54).

7. With respect to claim 6, Besson discloses the radiation source comprises an anode that includes a rare earth element, a platinum group metal, or combination thereof (column 21, lines 52-57).

8. With respect to claim 7, Besson discloses the radiation source comprises a voltage generator (column 13, lines 59-60).

9. With respect to claim 8, Besson discloses a switching element coupled to the voltage generator, the switching element configured to modulate the voltage generated by the voltage generator (column 35, lines 66+).

10. With respect to claim 9, Besson discloses an imager (114) for generating image data in response to radiation that has been filtered by the layer.

11. With respect to claims 10 and 29-33, Besson discloses the imager has a first image element for generating a first image data in response to radiation that has been filtered by the first portion of the radiation filter, and a second image element for generating a second image data in response to radiation that has been filtered by the second portion of the radiation filter (column 4, lines 39-64).

12. With respect to claim 11, Besson discloses a gantry, wherein the imager and the radiation filter are secured to the gantry (column 3, lines 53-54).

13. With respect to claim 12, Besson discloses the imager (114) is coupled to a support structure (128) for supporting an object (116) to which filtered radiation (132) is directed.

14. With respect to claims 13, 34, and 42, Besson discloses either or both of the first and second X-ray filtering materials are selected from the group consisting of aluminum, copper, and molybdenum (column 21, Table 1).

15. With respect to claims 22 and 23, Besson discloses the first filter factor is applied by placing a first filter into the X-ray radiation, and the second filter factor is applied by placing a second filter into the X-ray radiation (column 9, lines 45-60).

16. With respect to claim 24, Besson discloses the first filter factor has a same filtering characteristic as the second filter factor (column 9, lines 45-60).

17. With respect to claim 25, Besson discloses the first filter factor is different from the second filter factor (column 9, lines 45-60).

18. With respect to claim 27, Besson as modified by Albert discloses the first filter factor and the second filter factor are applied by placing a first filter and a second filter, respectively, into the first and second X-ray radiation (Albert – column 7, lines 56-68 & column 8, lines 59-64).

19. With respect to claims 28 and 40, Besson discloses the first filter (Fig. 2, 152) and the second filter (154) are secured to a rotatable structure (filter 150 is wheel-shaped and rotates).

20. With respect to claim 41, Besson discloses the positioner comprises a motor (156).

21. With respect to claim 46, Besson discloses an electron gun (Fig. 26, 2604) for sending electrons (2606) towards the first or the second target material (2608).

22. With respect to claims 47-50, Besson discloses an electron deflector for changing a path of the electrons; wherein the electron deflector comprises an electromagnetic field generator; wherein the electron deflector comprises a magnetic field generator; wherein the electron deflector physically deflects the electrons (column 45, lines 55+).

23. With respect to claim 51, Besson discloses a gantry to which the structure is secured (column 3, lines 53-54).

24. With respect to claims 52 and 53, Besson discloses the structure is part of a MRI (column 60, line 6) or PET machine (column 59, lines 61-62).

25. With respect to claim 54, Besson discloses the first x-ray filtering material comprises a k-edge filter (column 21, lines 16-20).

26. With respect to claim 55, Besson discloses the first x-ray filtering material has a x-ray transmission window that is above a k-edge, and the second x-ray filtering material has a x-ray transmission window that is below the k-edge (column 32, lines 25-27).

27. Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besson (USPN 6,950,493 B2) in view of Albert (USPN 4,048,496) as applied to claim 1 above, and further in view of Seki et al. (USPN 3,610,984).

28. With respect to claims 43-45, Besson/Abert does not specifically disclose the first target material forms a ring configuration; the first target material and the second target material are positioned concentrically relative to each other; and the first target material and the second target material are positioned relative to each other in a side-by-side configuration. Seki et al. disclose the first target material forms a ring configuration; the first target material and the second target material are positioned concentrically relative to each other (column 3, line 33); and the first target material and the second target material are positioned relative to each other in a side-by-side configuration (see Figs. 3-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second target materials of Besson/Abert to

form a ring configuration, wherein the first target material and the second target material are positioned concentrically relative to each other; and the first target material and the second target material are positioned relative to each other in a side-by-side configuration, to form a more compact anode, resulting in a smaller and lighter X-ray source.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Keitaro et al. (JP 05-036368) disclose an anode with two target materials each having a corresponding filter.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jurie Yun
Primary Examiner
Art Unit 2882

November 15, 2007